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Discussions

# *Interactive comment on* "Source contributions to 2012 summertime aerosols in the Euro-Mediterranean region" *by* G. Rea et al.

**F. Dulac (Editor)**

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I find this paper very welcome in the ChArMEx special issue and thank you for your manuscript initial revision. Here are a few minor comments for your attention:

-Regarding the surface PM dataset that does not cover the Mediterranean basin, I would like to stress that there are 2 datasets available from background stations sited in the Island of Corsica within the NW Mediterranean basin that you would be welcome to include in your analysis; they are located at Venaco ($\sim$660 m in alt., PM2.5 until 9 July and PM10) and Ersa ($\sim$535 m in alt., PM10 only, from June 11 on); I could send you the corresponding data files, originally available from the local air quality agency web site and MISTRALS/ChArMEx data base, respectively, at:

http://www.qualitaircorse.org/air-corse/qualite-air.php?menu=19&station=110)

http://mistrals.sedoo.fr/?editDatsId=592&datsId=592&project_name=ChArMEx&q=PM10

-In section 2, I would expect some statistics on the number of days with available information from the various observational data sets. As a consequence, I suggest an additional figure following the format of Fig. 1 including 4 maps respectively showing (i) PM10 stations, (ii) PM2.5 stations, (iii) AERONET stations, and (iv) MODIS pixels, all equally colour-coded by the number of days with observations during the considered 92-d period.

-The quality of satellite products evaluated globally may significantly vary in space and time. I would expect a comparison between collocated MODIS and AERONET data to confirm the quality of the MODIS AOD for the considered sub-regions.

-In Figure 10, you could add the standard deviation on the plots, at least along the total (REF) profiles; vertical bars might also help visualizing model altitude levels.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 8191, 2015.